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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,777	03/22/2005	Tadashi Watai	1207-113	6216

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EXAMINER

HANNON, THOMAS R

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/528,777

Applicant(s)

WATAI ET AL.

Examiner

Thomas R. Hannon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-32 and 34-37 is/are rejected.
- 7) ☒ Claim(s) 18 and 33 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/18/05; 3/22/05
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- ☐ Notice of Informal Patent Application
- ☐ Other: ____

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-9, and 37 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kishizono et al. JP 07-269562.

Claims 1-3 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Harris et al. US 3,075,816. Note Figure 8 showing the low coefficient of friction layer, which corresponds to the claimed synthetic resin-made annular sheet. The disclosed thickness of “about .005 inch thick” anticipates the claimed range of claim 3.

Claims 1-3 and 34-36 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Asai et al. JP 05-044716.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishizono et al. as applied to claim 1 above, and further in view of Harris. Harris discloses a thrust bearing assembly with the interposition of a low coefficient of friction layer having a thickness “of about .005” inches. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the assembly of Kishizono to optimize the thickness of the sheet member 400 to within a minimum range, as taught and suggested by Harris.

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Claims 10-17, 19-12, and 25-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kishizono et al. JP 07-269562 as applied to claims 1, 2, 4-9, and 37 above, and further in view of JP 141926/1989.

JP '562 discloses a sliding thrust bearing assembly in which a first bearing body (30) has an annular surface, a second bearing body (40) which is superposed on the first bearing body has an annular surface opposed to the annular surface of the first bearing body. The bearing bodies include a closed recess (see figure 2) surrounded by a projections formed on the annular surface, the recess is adapted to be filled by a fluid. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bearing assembly of Kishizono such that the annular surface in contact with the annular sheet 400 include projections and a recess for the desired purpose of reducing the coefficient of friction between the relatively rotating parts. With respect to claims 15 and 30, the specific composition of the lubricant used in the bearing assembly would have been obvious to one of ordinary skill in the art at the time the invention was made, subject to known parameters, such as compatibility with the bearing material compositions. With respect to claims 22 and 25-30, the interposition of another annular sheet on the opposite side of the member 50 of JP '141926 would have been an obvious duplication of parts.

Claim 18 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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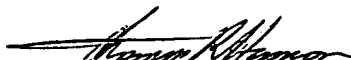
As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas R. Hannon whose telephone number is (571) 272-7104. The examiner can normally be reached on Monday-Thursday (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Thomas R. Hannon
Primary Examiner
Art Unit 3682

trh